

Hello Everyone,

We've finished the February 11, 2014 Bulletin 120 (B120) forecasts update. The forecasts include observed conditions through the morning of February 11, 2014 and is posted at <http://cdec.water.ca.gov/cgi-progs/iodir?s=b120up>.

Forecast Summary:

Considering the rivers forecasted in the B120 update, the projected median April-July runoff in the major Sierra river basins ranges from 13 percent on the Tule River to 54 percent for the Inflow to Shasta Lake. On average, the forecasts have risen 3 percent since the February 1 B120 forecast thanks to the heavy precipitation and moderate gains in the snowpack for the Northern and Central Sierra watersheds. All rivers north of the Merced River saw an increase in the forecast, with the maximum increase in the American River (9 percent). All rivers south of the Merced River saw a drop in the April-July forecast of 1 to 2 percent. The Merced River forecast remained equal to the February 1 forecast.

Runoff:

As is evident from the forecast update, the Full Natural Flow rates for the month of February indicate where the effects of last week's storm were realized. For all rivers considered in this forecast update north of and including the Tuolumne River, monthly flow rates range between 28 percent for the Sacramento River at Bend Bridge to 83 percent for the American River at Folsom. South of the Tuolumne, the monthly flow rates for February range from 8 percent on the Merced River to 24 percent on the Kern River.

Precipitation:

On February 6, a low grade atmospheric river pushed into Central and Northern California and brought a much-needed boost of precipitation to the State and in many areas doubling (or more) seasonal rainfall totals. While this precipitation and snow was not captured in the February 1 Bulletin 120 forecast, it is contained in this week's update. Four-day precipitation totals include: 17.24" at Four Trees (Feather R basin), 12.68" at Georgetown (American R basin), 15.68" at Huysink (Yuba R basin), 8.76" at Calaveras Ranger Station (Stanislaus R basin), and 6.12" at Stouts Meadow (McCloud R basin). The bulls-eye of the storm was centered around the Feather, Yuba, and American River basins, but significant precipitation was observed as far north as Mt. Shasta and as far south as Yosemite (at least when compared to season-to-date totals).

As of February 11, the Northern Sierra 8-Station index has recorded 7.4 inches of precipitation since February 1 which equaled 165 percent of the season-to-date total prior to February 1. The 7.4 inches represents 93 percent of the average February total. The season-to-date total is 11.9 inches representing 40 percent of average to date and 24 percent of the average Water Year total of 50.0 inches. Despite the impressive storm totals, the Northern Sierra precipitation index remains well below average.

Dry winter conditions continue to characterize the San Joaquin region as well. The impressive storm which soaked the Northern Sierra did not have as big of an impact in the San Joaquin region. Nonetheless, as of the morning of February 11, the San Joaquin 5-Station index showed a gain of 3.7 inches since February 1 compared to 4.7 inches which fell prior to February 1. The 3.7 inches represents 54 percent of the average February total. The season-to-date total of 8.4 inches represents 35 percent of average to date and 21 percent of the average Water Year total of 40.8 inches.

Snowpack:

The same Atmospheric River that drastically improved rainfall totals in many basins doubled the Statewide snow water content as indicated by the automated snow sensors. Some locations saw in excess of 30 inches of snow depth accumulation despite generally high freezing elevations associated with the storm. As of February 11, 2014 the snow sensor data indicates that the Northern Sierra, Central Sierra, and Southern Sierra snowpack are 19, 36, and 27 percent of their season-to-date averages respectively. The statewide snowpack as of February 11 shows 5.9 inches of snow water content (up from 2.7 inches of water content on February 1) which is 29 percent of average to date and 21 percent of the April 1 average.

Weather and Climate Outlook:

For the Northern portions of the State, it appears we've settled into a more winter-like pattern of occasional storms bringing light to moderate amounts of precipitation to the watersheds. Unfortunately for the watersheds south of the Delta, predominantly dry conditions remain in the immediate forecast. For the next two days, expect another light Atmospheric River storm to bring moderate amounts of precipitation to the North Coast with lighter amounts into the Trinity/Shasta drainages and a sprinkle or two into the Feather River watershed. Freezing elevations will generally be above 9000 feet for this storm. For the weekend, another round of precipitation pushes further into Northern California again providing moderate amounts of precipitation to the Northern Sierra Nevada as far south as the American River basin. The Upper San Joaquin watersheds may see very light amounts of precipitation from this storm. Freezing elevations will drop to the 7000-8000 feet level.

The NWS Climate Prediction Center's (CPC) one-month outlook for February, last updated on January 31, 2014, suggests increased chances of above normal temperatures for California. The only exception is a sliver of Northern California ranging from Redding northward with equal chances of above or below average temperatures. The same outlook predicts increased chances of below normal precipitation ranging from Sacramento southward. The portion of California north of Sacramento is predicted to have equal chances of above or below average precipitation.

The CPC's three-month outlook (February through April), last updated on January 16, 2014, suggests increased chances of above normal temperatures for all of California. The same outlook predicts increased chances of below normal precipitation for California with the exception of the corner near Oregon and Nevada with equal chances of above or below average precipitation.

Next Update:

The next Bulletin 120 forecast update for conditions on February 18, 2014 will be available on February 20, 2014.

If you have any questions regarding this forecast, please contact a member of the Snow Surveys staff. We are happy to help.